

Remarks/Arguments

Claims 16, 20 – 24, and 27 – 28 remain in this application. Claims 16 and 24 have been amended to emphasize the patentable distinctions of applicant's invention over the prior art. In supplementing the September 26, 2005 Amendment, the present Amendment has once again amended independent claims 16 and 24, respectively, to call for the particular isoform of the VEGF family to be VEGF-B instead of PIGF, because this is a preferred isoform of the vascular endothelial growth factor for the present application.

Independent claim 16, as amended, discloses a method for monitoring the clinical effectiveness of the administration of a formulation comprising one or more therapeutic growth factor proteins in the treatment of coronary artery disease, the method comprising the steps of: (a) selecting a patient displaying symptoms of coronary artery disease; (b) administering at least one dose of an effective amount of a first therapeutic growth factor protein formulation comprising a growth factor protein selected from the group consisting of FGF-1, FGF-2, VEGF-B, and mixtures thereof by inhalation therapy; (c) obtaining a sample of a biological fluid from the patient displaying symptoms of coronary artery disease; (d) performing an assay of the biological fluid to determine an amount of CPK-MB present in the fluid; (e) determining, based on monitoring the amount of CPK-MB present in the fluid, whether an additional dose of a therapeutic growth factor protein formulation is necessary; (f) depending on the results of the step e), administering one or more additional doses of a second growth factor protein formulation comprising a growth factor protein being selected from the group consisting of FGF-1,

FGF-2, VEGF-B, and mixtures thereof; and (g) repeating steps c) through f) until the assayed levels of CPK-MB in the biological fluid indicates the clinical effectiveness of the administration of the pharmaceutical formulation and amelioration of the symptoms of coronary artery disease in the patient, or until there is a contraindication to continued treatment.

Independent claim 24, as amended, recites a method for monitoring the clinical effectiveness of the administration of a potentially therapeutic pharmaceutical formulation selected from the group consisting of FGF-1, FGF-2, VEGF-B, and mixtures thereof, in the treatment of chronic coronary artery disease, the method comprising the steps of: (i) selecting a patient displaying symptoms of chronic coronary artery disease; (ii) administering at least one dose of an effective amount of a first therapeutic growth factor protein formulation comprising a growth factor protein selected from the group consisting of FGF-1, FGF-2, VEGF-B, and mixtures thereof by inhalation therapy; (iii) monitoring one or more clinical indicators of chronic coronary artery disease; (iv) determining, based on monitoring the one or more clinical indicators of chronic coronary artery disease, whether an additional dose of a therapeutic growth factor protein formulation is necessary; (v) depending on the results of the step e), administering one or more additional doses of a second growth factor protein formulation comprising a growth factor protein being selected from the group consisting of FGF-1, FGF-2, VEGF-B, and mixtures thereof; and repeating steps c) through f) until there is a clinical indication of amelioration of the symptoms of chronic coronary artery disease in the patient, or until there is a contraindication to continued treatment.

Each of the amendments to the claims is clearly supported by the specification, as originally filed in Parent Application Serial No.: 09/828,330. The present application is a division of the Parent Application, which has now issued as U.S. Pat. No. 6,759,386. See Col. 6, lines 40-59; Col. 11, lines 4-8; and Col. 12, lines 41-46 of the '386 patent.

Claims 16, 20-24, and 27-28 were rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 4, 5, 11, 12, 13, 14, 15, and 20 of U.S. Patent No. 6,759,386 (6 July 2004) Franco (hereinafter "the '386 patent"). This was a statutory-type double patenting rejection.

MPEP 804(II)(A) states the rules for determining whether a statutory double patenting rejection is appropriate. This section asks the question, "Is there an embodiment of the invention that falls within the scope of one claim, but not the other?" If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist. For example, the invention defined by a claim reciting a compound having a "halogen" substituent is not identical to or substantively the same as a claim reciting the same compound except having a "chlorine" substituent in place of the halogen because "halogen" is broader than "chlorine." *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

Present claims 16, 20 – 24, and 27 – 28 call for the method step of administering at least one dose of an effective amount of a first therapeutic growth factor protein formulation comprising a growth factor protein selected from the group consisting of FGF-1, FGF-2, VEGF-B, and mixtures thereof by inhalation therapy. By way of comparison, the '386 patent claims the method step of administering at least one dose of

an effective amount of a first therapeutic growth factor protein formulation comprising a growth factor protein being selected from the group consisting of FGF-1, FGF-2, VEGF, and mixtures thereof by inhalation therapy. The '386 patent discloses at Col. 6, lines 53-56 that "[t]he VEGF family of structurally related growth factors has five mammalian members, VEGF, VEGF-B, VEGF-C, VEGF-D, and placenta growth factor (PIGF), all encoded by separate genes". The '386 patent further discloses at Col. 11, lines 4-8 that "using delivery and formulation technology available today, as would be recognized by one of skill in the appropriate art, it will be possible to deliver an effective amount of FGF and/or VEGF, and related growth factor proteins, in the treatment of chronic and acute heart disease."

Applicant respectfully submits that the same invention is not being claimed twice. Significantly, present claims 16, 20 – 24, and 27 – 28 call for a more narrowly defined combination of growth factors than those claimed in the '386 patent, because VEGF defines a broad family of growth factors, wherein VEGF-B is a specific member of that family. Therefore, it is respectfully submitted that identical subject matter is not defined by both sets of claims, respectively, and statutory double patenting does not exist.


Accordingly, reconsideration of the rejection of claims 16, 20 – 24, and 27 – 28 under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 4, 5, 11, 12, 13, 14, 15, and 20 of the '386 patent is respectfully requested.

Conclusion

In view of the amendments to the claims, and the remarks set forth above, it is respectfully submitted that the present application is in allowable condition. Reconsideration of the rejection and allowance of claims 16, 20 – 24, and 27 – 28, as amended, are earnestly solicited.

Respectfully submitted,

Wayne P. Franco

By: 
Ernest D. Buff
(His Attorney)
Reg. No. 25,833
(908-901-0220)